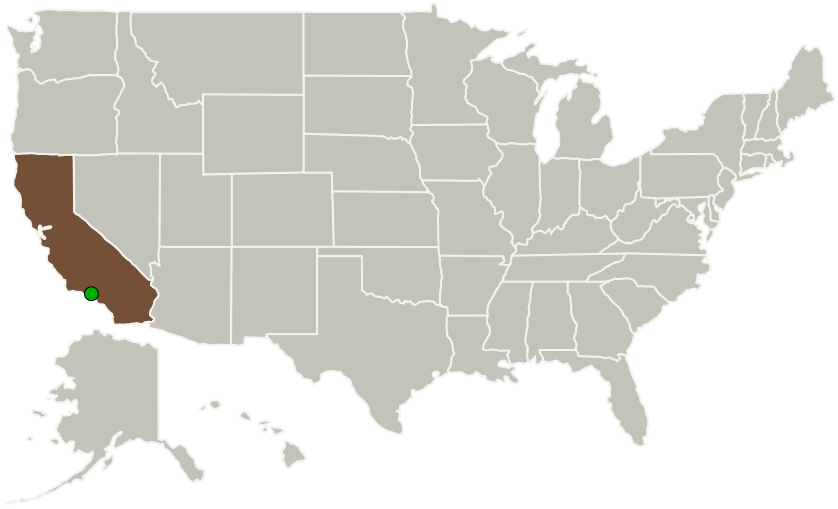
Modular Actuators for Space Applications, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

Rocketstar Robotics is proposing the development of a modern dual drive actuator. Rocketstar has put together numerous modern concepts for modular actuators that feature gear ratios on the order of 1000:1 and would be ideal candidates for many space applications. These actuators are evolutionary advancements of actuators that are currently in use today and offer performance benefits over heritage counterparts including; higher torque margins, flexible gear ratios, flexible gearing components, higher specific torque and the ability to be non redundant, electrically redundant or fully mechanically and electrically redundant.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
NEA Electronics, Inc.	Lead Organization	Industry	Moorpark, California
Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California

Primary U.S. Work Locations
California

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Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138323)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

NEA Electronics, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Douglas Petercsak

Co-Investigator:

Douglas Petercsak

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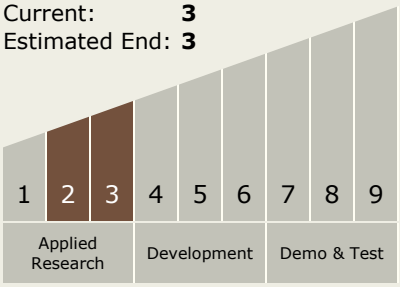
Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



Technology Areas

Primary:

- TX15 Flight Vehicle Systems
  - TX15.1 Aerosciences
    - TX15.1.5 Propulsion Flowpath and Interactions

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System